CALIFORNIA RFG FORUM

CALIFORNIA PHASE 2 REFORMULATED GASOLINE NEWS NO. 2—FEBRUARY 1995

No Problems Reported as Southern California Switches to Federal RFG

Federal reformulated gasoline (federal RFG) has been flowing through pipelines and retail nozzles in southern California for over a month and, according to industry and government officials, federal RFG has meant business as usual. With the start of the new year, motorists in six southern California counties are now using less-polluting gasoline. On January 1, the federal regulation took effect—requiring the use of federal RFG in the nine worst-polluted areas in the nation, including most of southern California.

The area's 5,000+ service stations have taken the transition in stride. According to Jan Speelman of the Automotive Trade Organizations of California (Auto-CA), the introduction of federal RFG is "going well because the public hasn't experienced any problems—no long lines or drastic price increases."

No performance problems, no long lines, no drastic price increases. . .

Spokespersons for the refineries making federal RFG confirmed that the switch has been "blissfully uneventful." However, some observed that stable or falling prices at the pump means that producers haven't begun to recoup their capital investment needed to produce federal RFG.

While U.S. Environmental Protection Agency officials were confident that the introduction of the new fuel would go smoothly, they are breathing easier now that the deadline has past. "We have not had any reports of performance problems," said Dave Schmidt, a spokesman for EPA's San Francisco office.

For more information, call Sylvia Dugré (U.S. EPA, Region IX) at (415) 744-1224.

INSIDE — CALIFORNIA RFG FORUM

PERFORMANCE

ARB Test Plans Final; Industry Testing Begins

With the kickoff of the Air Resources Board's (ARB) California RFG Performance and Compatibility Test Program (Test Program) coming in February, it won't be long before more than 1,000 cars and trucks as well as other vehicles and equipment will put California Phase 2 reformulated gasoline (California RFG) to the test. The contract for test fuel production and distribution is in place, test fleets have been selected in northern and southern California, and the testing protocol is final. Ship the fuel and start your engines.

Phillips 66 Company has produced the first 150,000 gallons of California RFG fuel in Texas. In February, the test fuel will be transported by railway to California and delivered to over 12 northern and southern California test sites.

For about six months, between February and August 1995, selected vehicles, boats, and utility equipment will use this test fuel exclusively. Participating vehicle fleets include the City and County of Sacramento, CalTrans, Bank of America, GTE California, Pacific Bell, and California State University, Fresno. Additional fleets are expected to be added to augment testing activities. Light-duty automobiles and medium and heavy-duty trucks, representing a wide range of

continued on page 3

TRANSITION

Federal RFG: A Preliminary Assessment

The California Energy Commission issued the following preliminary assessment on the transition to federal RFG in southern California:

Supply—There is a more than adequate supply of federal RFG in southern California, with no production problems at the refineries. Production and refinery inventory levels are what would be expected for this time period to meet demand.

Terminal Deliveries—Information on deliveries to pipeline terminals indicates that sufficient product was available in volumes similar to previous years.

Market Dynamics—The current price of federal RFG is lower than might have been expected to recover investments for making the new product. The wholesale price of federal RFG in Los Angeles is less than the price for the same fuel in New York and only a couple of cents higher than the price of conventional gasoline in San Francisco. If production decreases, the price of federal RFG may go up.

Other Issues—There were no reported mechanical problems at the refineries and the transition was considered by most to be a relatively smooth one. Although there was some apprehension about the adequacy of segregated storage of additional gasoline products, it was not a big problem.

The most common complaint regarding the transition to federal RFG was in reference to administrative burden—with the resulting financial burden—of the federal reporting requirements, including difficulty in interpreting some of the regulatory requirements and a large volume of associated paperwork.

PUBLIC EDUCATION

Feds Put RFG in the News

Since late-November, articles on federal RFG have appeared in northern and southern California newspapers including the L.A. Times, San Francisco Examiner, and the San Jose Mercury News.

While the focus has been on the introduction of federal RFG in southern California, many articles end on the note that California RFG is coming next year. Not surprisingly, price is a big part of the story.

Focus is on Price—The effect of federal RFG on gasoline prices has been a prominent theme in most articles, if not the headline. Before the retail sale of federal RFG started, the story was higher production costs and expected higher prices. Now that federal RFG is on-sale and prices haven't changed or, in some cases, have gone down, the story is "expected higher prices." Newspaper journalists are becoming familiar with RFG and are telling their readers that someday cleaner gasoline will probably cost more.

RFG PR at the Pump—Oil companies have launched campaigns across the country to educate consumers about federal RFG and polish their corporate images. The Lundberg Letter, a bi-monthly collection of statistics and analysis for the oil marketing industries, devoted part of its December 20 edition to "Deciphering an Industry Message: RFG 'PR' At the Pump." The article includes a summary of what a dozen major gasoline suppliers are doing to publicize federal RFG. It also notes that many trade associations involved with the sale of gasoline have published a wide range of materials on federal RFG.

The Air Resources Board (ARB) has published a Request for Proposal for consultation services to help develop a public education campaign on California RFG. They expect to select a contractor by mid-February.

The ARB and its Phase 2 RFG Public Education Subcommittee are publishing a fact sheet on California RFG testing programs.

CALIFORNIA RFG INFORMATION

✎ For additional copies of *California RFG Forum*, *California RFG Fact Sheets*, or questions about RFG, call (800) ARB-HLP2 (inside Calif.) or (916) 323-3336 (outside Calif.) or fax (916) 445-5023.

✎ The *Motor Vehicle Fuels Manual* is available through ARB's Compliance Assistance Program. Written for technical and environmental personnel, the manual contains the latest fuel regulations—including California Phase 2 RFG. To order a copy, please contact Michele Vale at (916) 327-7211.

VIEWPOINT

Project Leader Presents Preliminary Findings for Alternative Fuels Study

by Dr. George Sverdrup, Battelle—Since federal and California regulations require dramatic reductions in vehicle air pollution, government and industry managers must make tough decisions based on the viability of alternative fuels—including California RFG. As Project Manager of the CleanFleet Demonstration Project (also known as the South Coast Alternative Fuels Demonstration), I oversee a study that will help us objectively compare available fuels.

Fuels Studied—The $16 million study, funded by a public-private consortium of 19 sponsoring agencies and companies, is one of the first comprehensive, side-by-side evaluations of alternative motor vehicle fuels. Its purpose is to evaluate air emissions, costs, maintenance, durability, reliability, safety, and performance of commercial vehicles operated on one of five alternative fuels. These include California RFG, methanol as M-85 (85% methanol and 15% California RFG), propane gas, compressed natural gas, electricity, and regular unleaded gasoline as the control fuel.

During the study period from June 1992 through September 1994, 111 Federal Express delivery vans were operated day-in and day-out on the various fuels—traveling over three million miles in the Los Angeles area. As a result, we gathered extensive data from the study. So far, we have distributed five topical reports (on subjects ranging from emissions to engine oil analysis) and seven data reports. In the spring, we will release a detailed estimate of the costs of infrastructure, ownership, and operation for the five fuels.

Preliminary Findings—I recently presented our key preliminary findings at a news conference in Los Angeles. Of special interest to *RFG Forum* readers are the twenty-one vans, fueled with California RFG, that were each driven over 18,000 miles. The ozone-forming potential of the emissions from these vans averaged from 12 to 38 percent less than control vehicles, depending on the vehicle make. We also found that vans operating on California RFG performed as reliably as those vans fueled with conventional, unleaded gasoline. Overall, we found that all the alternative fuels tested emitted carbon monoxide, nitrogen oxides and nonmethane organic gases at levels less than or near those found in vans using conventional unleaded gasoline.

Between now and July 1995, the project team will analyze data and prepare a final report. Data and reports are available from Battelle at (614) 424-4062.

Dr. George Sverdrup is Program Manager at Battelle, 505 King Avenue, Columbus, Ohio 43201-2693.

Performance *Cont. from page 1*

engines and equipment, will be tested. All vehicles fueled with California RFG will be compared to control vehicles fueled with conventional gasoline. The fleets will include some pre-1985, light-duty vehicles which may be sensitive to changes in fuel composition and therefore should be evaluated. In addition to the on-road vehicles, a variety of agricultural and landscaping vehicles and equipment will receive the test fuel.

Researchers will:

- Conduct monthly "under-the-hood" vehicle fuel system inspections;
- Collect data on vehicle fuel economy;
- Investigate vehicles with performance problems (including poor starting, cruising, acceleration, stalls, gasoline odors or leakage, and unusual engine noises) in cooperation with industry; and
- Monitor vehicle emissions (selected vehicles).

Other tests of California RFG have already begun. Many equipment manufacturers are testing California RFG in a wide range of on-road and off-road motor vehicle engines and fuel system components, both in the laboratory and in the field.

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RFG & HEALTH

California RFG Reduces Volatile Organic Compounds*

Volatile organic compounds (VOCs) are one of the many pollutants that are reduced when gasoline is refined to meet the specifications of California RFG. VOCs in the air react with nitrogen oxides to form lung-damaging ozone (the main ingredient in smog). Moreover, some VOCs can cause cancer. Gasoline and solvent-containing products are major sources of VOCs.

CALIFORNIA REFORMULATED GASOLINE ➡	CUTS VOCS ➡	TO REDUCE OZONE & PROTECT YOUR HEALTH
▼ Lower Reid vapor pressure ▼ Lower aromatic hydrocarbon content ▼ Lower distillation temperatures ▼ Less sulfur (protects vehicle catalysts) ▲ Added oxygenates	▼ In 1996, RFG cuts VOC emissions compared to today's gasoline by 17% (190 tons per day)	▼ Reduces breathing difficulties ▼ Reduces lung tissue damage ▼ Reduces vegetation damage

DEFINITIONS

Reid vapor pressure (RVP)—RVP is a measurement of a liquid's tendency to evaporate. Lower RVP in gasoline means less evaporation and less air pollution.

Aromatic Hydrocarbons—Aromatic hydrocarbons help determine the rate at which gasoline burns. By limiting aromatics in gasoline, emissions of VOCs, nitrogen oxides, and toxics are significantly reduced.

Distillation temperatures—Distillation temperatures are the temperatures at which a given amount of gasoline will evaporate. The limits required for California RFG reduce emissions of VOCs in engine exhaust.

* Future editions of *California RFG Forum* will present information on other pollutants reduced by California RFG.

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Next Advisory Committee Meeting: June 7, 1995